



## DEVELOPMENT AND SUSTAINABLE FOREST MANAGEMENT IN NIGERIA: IMPLICATION OF COUNTRY'S INSECURITY

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### Abstract

Forests represent important natural resources that help developing countries in the area of sustainable livelihood. However, mismanagement of the forestland in the course of urbanization, industrialization and illicit agricultural practices has led to forest degradation. Therefore, towards perpetuating the benefit of forest resources, several forest policies and Sustainable Forest Management (SFM) were employed. This paper reviews the trend of forestry development in Nigeria, its sustainable management and implications of insecurity on the forest estate. Forestry development has been in existence in Nigeria as far back as 1889 with emphasis on forest reservation and controlled timber exploitation. Politics, Poor forest management plan and enforcement of forestry legislation, unclear land tenure and property right and deforestation are some of the factors that influence sustainable forestry development. It is concluded that forestry development in Nigeria has never been undermined and several policies formulated as well as SFM have been helpful in the sustenance of Nigeria forests. Therefore, efforts of the stakeholders in forestry sectors and political leaders at all levels on the approach must not be relaxed. Every tier of government should work on training, education and empowerment of rural dwellers on alternative green entrepreneurs that will enhance sustainable livelihood and reduce pressure on the forest estates

**Keywords:** Livelihood, Mismanagement, Urbanization, Degradation, Forest resources

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### Introduction

Forestry can be defined as the “scientific management of forests for the continuous production of goods and services”. The lives of the largest percentage of the entire world populace depend on the forest. Trees are cultivated to meet some definite objectives. By and large, in planting the right tree the social and the economic benefit must be considered. Any error in this direction will lead to poor result in the future (Ojo *et al.*, 2008).

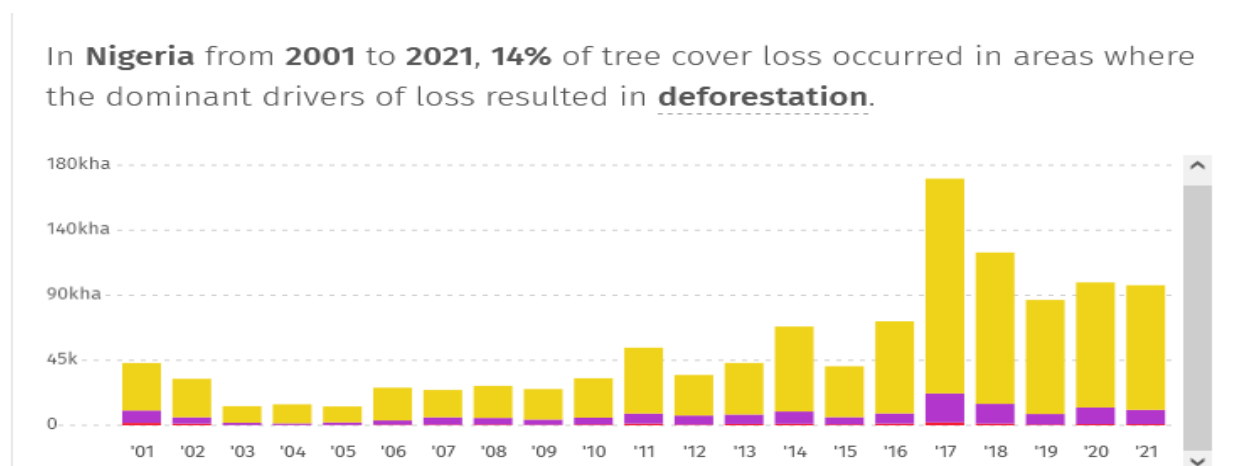
Forests represent important natural resources that help developing countries improving their economic well-being. More than 1.6 billion people throughout the world depend on forests for some part of their livelihood (Rhett, 2020). Forests provide a wealth of important wood and non-timber forest products (such as edible nuts and fruits, medicinal plants, fibres, rattan, gum Arabic and tannins) that people in the developed and developing world rely on (Ojo *et al.*, 2008). The value of wood and non-timber products provided by forests is immeasurable. In addition, forests provide environmental preservative services such as regulating water supplies and soil erosion control. These services have an enormous impact on worldwide agricultural productivity and human health. Forests play vital roles as major stores of greenhouse gases, such as carbon. This important function contributes to reducing global warming. Forests also provide important habitat for wildlife. Experts estimate that 70 percent of all land-based plants and animals live in forests (USAID, 2007).

### Gestalt of Forestry Development in Nigeria

Forestry development came into existence in Nigeria since 1889 with emphasis on forest reservation and controlled timber harvesting (Geomatics, 1997). Before independence, available forest resources could adequately meet the needs of the country, both for the export market and for local needs. However, after independence, pressure was exerted on forest resources to generate revenues in order to support the young economy and respond to the needs of increasing populace. It has therefore become clear that available resources cannot be taken for granted without conscientious intervention. (Geomatics, 1997). Several programmes were therefore implemented at local and country levels such as Tropical shelter wood system (TSS), Enrichment planting schemes and agroforestry. Most of which were issue-specific without a holistic review of the forest sector. The problems plaguing the sector invariably persist in spite of huge financial commitment to these forest development programmes (Nwoboshi, 1986). In the 1960s and early 1970s, more than 60 percent of domestic export earnings came from forest products. During this period, timber supplies outweighed demand, but the country is currently unable to meet export demand for most tropical hardwood species from the natural forest (Geomatics, 1997). Mismanagement of forestland during logging and agricultural production activities has led to policy of the creation of forest reserves. But the policy that came about was not based on adequate knowledge of ecology, biology and silviculture of the natural forest ecosystem (Osemeobo, 1998). There was pervasive tendency to either over-value or under estimate the economic, social and ecological cost of forest utilization. In the 1980s, the demand for forest products, in particular wood, became insatiable because of the increasing pressure of the human population and economic growth. This led to unregulated forest exploitation, thus resulting in degradation of the forest resources in the country (Anadu and Green, 1990). From 2001 to 2021,

Nigeria lost 1.14Mha of forest cover, which equates to an 11% decline in forest cover since 2000 and 587Mt of CO<sub>2</sub>e emissions (GFW, 2021). The extent of this forest loss in Nigeria was ascribed to effects of land clearance for cropping by subsistence farmers in shifting cultivation. In fact, it accounted for about 80% of the deforestation (Enabor and Popoola, 1994). According to Nwoboshi (1986), it was estimated that 60 million hectares of Nigeria's total land area were forested in 1976, whereas in 1985 the figure fell to about 9.4 million hectares. In the year 2004 according to Food and Agriculture Organization, Nigeria had 15% forested land (FAO, 2004), it was evaluated at that time that about 360,000 km<sup>2</sup> (25.6%) of Nigeria land area was under forest cover (FAO, 2004).

In 1990's, the area of industrial forest plantations in Nigeria was about 160, 000 ha while the area of environmental plantations was 48,000 ha (Oyebo and Okiriguo, 1999). Rubber constitute about 50% of the plantation, *Gmelina arborea* - 30%, while *Pinus caribaea* account for about 1%. Other broad leaved tree species such as *Tectona grandis* and Eucalyptus species are moreover recovered within the plantation. However, improper forest management plan, nascent silvicultural practices, under-utilization of resources and high level of illicit logging within the forest plantation led to uncontrolled failures (FDF, 1998). According to Global Forest Watch (2021), 14% of tree cover loss between 2001 and 2021 occurred in area where the dominant drivers of loss resulted in deforestation (Fig. 1). In a bid to rescue the nation from this devastating state of Nigeria forest, the Federal Government of Nigeria (FGN) in 2019 seriously set out to embark on reforestation and afforestation programme so as to have 25% of total land area of the country forested. The programme is tagged National Afforestation Programme (NAP). The main aim of the NAP scheme was the ecological woodland restoration by the government and the development of forest resources with the help of the non-government sector, with a focus on increasing the livelihood of the forest-fringe community, including park rangers and those living in poverty. In achieving this, the FGN embarked on planting a minimum of 25 million trees where Forestry Research Institute of Nigeria (FRIN) raised 13 million seedlings; Great Green Wall raised about 7 million seedlings, and other sister agencies raised approved quantities based on their capabilities (Asinwa *et al.*, 2020).



Source: Global Forest Watch, 2021

Figure 1: Tree cover loss between 2001 and 2021 in Nigeria

**Factors affecting forestry development in Nigeria**

There are several elements required for assurance of sustainable forestry development. They include legal and policy framework, sustained and optimal production of forest products. It requires protection of the environment, and well being of people to be put in place. Absence of any of these elements can result in negative influence on the availability and utilization of the forest resources (Eugene, 2004). Aftermath of the occurrence (courtesy anthropogenic activities) would be disruption of the forest ecosystem leads to the depletion of the forest resource (Campbell *et al.* 1996; Cleaver and Schreaber, 1990). Generally speaking, some factors that can influence sustainable forestry development include:

**Politics**

Political instability has made various programmes aimed at sustainable forestry such as Tropical Forestry Action Plan (TFAP) and National Forestry Action Programme (NFAP), to be short lived. Similarly, World Bank (1991) reported that instability in the political and economic policies, as well as lack of political will to implement the right energy policies were some of the reasons leading to low response by potential investors in sub-Saharan Africa.

**Poor forest management plan and enforcement of forestry legislation.**

Management plans play significant role on sustainable forest development from the time of land acquisition, preparation to harvesting period. Nigerian factors most in relation to corruption have made the forestry legislation so cumbersome. .

### ***Deforestation***

The drastic reduction in forest areas across the globe towards other uses such as agricultural croplands, urbanization and industrialization is being referred to deforestation. The menace greatly affects development of forestry. Other factors includes

- ✓ Inadequate land use planning
- ✓ Dearth of information about the forest resource base
- ✓ High fuel wood consumption and poverty
- ✓ Inefficient use of the forest resources
- ✓ Low degree private sector participation in forestry
- ✓ Denial of indigenous people's right
- ✓ Unequal distribution of benefits and costs for the use of the forest
- ✓ Inadequate protected area network

### **Sustainable Forest Management (SFM)**

Sustainable Forest Management (SFM) is considered as one of the foremost critical commitments which the forestry segment can make to the feasible advancement and sustainable development targets of any country, especially those luxuriously blessed with forest resources

(FAO, 2007). The process of managing permanent forest reserves to realize one or more clearly indicated targets of administration with respect to the generation of a persistent stream of desired forest goods and services without undue diminishment in its inborn values and future efficiency and without undue undesirable impacts on the physical and social environment is called SFM

(ITTO, 2005). Towards optimum monitoring, evaluation and reporting of SFM, ITTO developed a set of key criteria and indicators (C&I) for the management of tropical forests. In a nut shell, the major objective of SFM is to ensure that derived forest production and products meet present-day needs without jeopardizing the future development. According to Jorge and Julio (2012), forest management includes the regulatory, legitimate, specialized, financial, social and natural angles of the preservation and utilization of forests. It suggests different degrees of human mediation, extending from activities pointed at conserving and protecting forest ecosystems and its capacities to favoring particular socially or financially profitable flora and fauna species for the improved production of goods and services (FAO, 2007).

### **Sustainable Forest Management Components**

Considering different definitions of SFM, several fora of forestry in different parts of world (such as World Commission on Environment and Development, (1987); Federal Leadership In Environmental, Energy, and Economic Performance (Federal Register 2009); The Ministerial Conference on the Protection of Forests in Europe (2009)) have suggested the following key components of SFM. They include:

#### ***Extent of forest resources***

This is all about having reasonable forest cover and stocking, including tree outside forests, to support the social, economic and environmental aspects of forestry. It encompasses ambitions to reduce deforestation and to restore and rehabilitate degraded forest landscapes.

#### ***Biological diversity***

This is towards conservation, preservation and management of biodiversity of the ecosystems. Such conservation, includes protection of areas with degraded ecosystems, basically to ensure maintenance of biodiversity, and provides advantages of new forest products development.

#### ***Forest health and vitality***

Management of forest is essential to reduce risks and influences of undesired disturbances such as wildfires, airborne pollution, storm felling, invasive species, pests, diseases and insects. The disturbances can impact social, economic as well as the environment in general..

#### ***Productive capacities of forest resources***

This explains the desire to preserve the supply of essential forest products at present and at the same time guaranteeing the existence of these products for the use of incoming generations without compromising the management of future eras

#### ***Protective functions of forest resources***

Here, the importance of forests on soil enrichment, watershed and environmental management is focused. This includes enhancement of drinkable water, reduction of flood risks, erosion control and drought management. It also contributes to ecosystem conservation efforts.

#### ***Socio-economic functions***

This looks into the important functions of forest to host and protect sites and ecosystem that have high cultural, spiritual or recreational values, and thus include aspects of land tenure systems/ownership, indigenous knowledge and management of communal systems.

### Criteria and indicators for SFM

Criteria and indicators are instruments utilized to characterize, evaluate and screen intermittent advance towards SFM administration in a given nation or a specified forest area, over a period of time. The ultimate aim of criteria and indicators is to enhance the improvement of all operations relating to management of forest at a particular period of time. Towards ensuring healthy and productive forest estates with reference to the social, economic, environmental, cultural and spiritual needs of the full range of stakeholder groups in countries concerned (ITTO, 2005).

The United Nations Conference on Environment and Development (UNCED) was held from June 3 through June 14, 1992, in Rio de Janeiro, Brazil. Among the agenda of the conference was the principles that guide SFM as a contribution towards sustainable development. Reconciliation among forest productive functions, protective roles, environmental and social roles was firmly discussed at UNCED. In this forum, not less than 27 guiding principles which target obligations of every country on environmental development was agreed. Following the conference about 160 countries are involved in development of C&I approach for SFM (ITTO, 2005).

Criteria and indicators can be used to encourage more holistic thinking when planning forest management activities, and to bring about greater rigor, openness, transparency and accountability in forest management planning. These C&I indicate the direction of change as regards to the forests and also suggest the ways to enhance the process to achieve the SFM. It would be supportive in adoption of better management practices so that the direction of change can be ascertained and timely actions to alleviate the foreseeable damages to forest resources can be put into consideration (ITTO, 2005).

### Overview of Insecurity in Nigeria

Nigeria is passing through an unprecedented wave of different security crises ranging from banditry, insurgencies to kidnapping. This is prevalent in every geographical zone of the country.

The country has always faced different difficult challenges at different times. Just in the the country underwent a good a three-year Civil War with serious aftermath effects on certain parts of the nation. Lives of innocent citizens and properties that worth millions of naira were lost during this period of unprepared war. Invariably, throughout this period of civil war, indiscriminate killings were order of the day as a result of much insecurity (Oyewusi, 2022). Immediately after the war, armed robbery crept in as another form of insecurity. The robbery was so rampant at that time with great effects on every facet of life in the country. This led to fiery promulgation of decree by the ruling military government that armed robbers caught should be killed by firing squad. It was at that period that violent armed robbers like Ishola Oyenusi and his gang were executed at the bar beach. Ever since then, the nation has witnessed different groups of armed bandits terrorizing the entire landscape for instance, Lawrence Anini and Shina Rambo, and it has resulted in the formation of different squad of the police force saddled with the responsibility of keeping men of the underworld at bay (Oyewusi, 2022).

At moment, the reigning source of insecurity in the country is herdsmen and cattle rustlers. The herders carry sophisticated weapons, descend on innocent farmers and their families and take their lives. Several lives have been lost by this barbaric act of notorious herders. The heinous incidence has led to unguided rancor among Fulanis and Bororos who are generally believed to be major herders and most of their host communities. In addition to the hostility, larger percentages of the southern rural communities in Nigeria have rejected the plea by the Federal Government to allow herdsmen to settle with them (Oyewusi, 2022).

The religious extremists otherwise known as Boko Haram have constituted another insecurity factor that is militating against peace and tranquility of Nigeria. For over a decade now, these religious extremists have being ravaging every nook and corner of the Northern part of the country. In fact the devilish venom of these evil men is now being felt in the Southern part of the nation. (Oyewusi, 2022). In almost every day, thousands of people are being killed, many have been displaced and now live in Internally Displaced Persons camps spread across the whole Northern States. More to this is kidnapping for ransom which has become an intractable problem. Innocent school children especially in the North are being kidnapped on a daily basis and taken into the deep forest while their parents are thrown into great despair (Oyewusi, 2022). Outrightly, forests are the conspicuous hideouts of the perpetrators of these evils. The forest serves as base for rebels to launch attacks, hideouts for armed robbers who attacks travelers and traders; hideouts for thieves, kidnapers, ritual killers, criminals, and cattle rustlers; and camping sites for insurgents, as well as a base from which non-state armed actors organize guerrilla attacks against the state and/or its economic interests. The implication is that forest reserves have become ungoverned spaces that are mobilized by insurgents and criminal elements and redirected to anti-state activities (Suleiman, 2014).

#### *Security threats posed by the Forests*

7. Forests provide cover as forests consist of plant communities of plants especially trees growing close together which can be used by hideouts or for launching attacks in an ambush.
8. Being isolated areas where nobody lives, forests are used by those who oppose the government or societal values and carry out activities that are against the law such as theft, armed robbery, and attack on security personnel.
9. Forests can also be used as places for criminal activities such as base for drug abuse, ritual killings and hiding of weapons.

10. Forests are areas where there is least of presence of security personnel especially in developing countries and as such crimes can be committed and help cannot easily come to the victims (Suleiman, 2014)

### **Implications of Insecurity on SFM**

The overall effect of insecurity on the sustainable forest management is forest degradation. In several occasions, insecurity has resulted in reducing the capacity of a forest to produce ecosystem services such as carbon storage and wood products as a result of anthropogenic activities such as building up of insurgent/bandit camps. Their activities constitute nuisance to the forest and its surrounding. This is evident from the findings of Suleiman (2014), who found that forests in the Northern part such as Sambisa Forest Reserve, Rumah/Kukar Jangarai Forest Reserve, kamuku Forest Reserve, kagoro Forest, kabakawa Forest Reserve, Idu and Gwagwa Forest Reserves, Falgore Forest and Balmo Forest were degraded either partially or wholly through deforestation.

### Strategies towards sustainable forestry development

- The Federal, State and Local governments should work on training, education and empowerment of rural dwellers (most especially those living around the forest) on alternative green entrepreneurs such as establishment of wood lot, bee keeping, snail farming, mushroom production, rabbit farming and so on. This will enhance sustainable livelihood and reduce pressure on the forest
- Involvement of rural communities in the forest management must be highly encouraged.
- Development of new security strategies and encouragement/empowerment of local hunters to prevent infiltration of the forest.
- Every policy that enhances establishment and management of forest policies must be implemented accordingly without prejudice.
- In order to improve sustainable forest development, incessant field survey and dissemination of information should be encouraged

### **Conclusion**

Forestry development in Nigeria has never been undermined from time immemorial. Significant efforts were always put in place basically to ensure continuous benefits from forest resources. Unfortunately, with upsurge in population coupled with incessant development (urbanization and industrialization) the developmental trend of forestry is dented. The impact of defective leadership and that of pronounced insecurity on country's forest estate cannot be overemphasized. Nevertheless, sustainable forest management is a veritable means which has being relatively keeping the sustenance of Nigeria forests. Therefore, efforts of the stakeholders on the approach must not be relaxed.

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